

13.1 Introduction

This chapter describes the regional visual character and visual resources of the project construction and operation areas and views of the project construction and operation areas from important adjacent vantagepoints. In addition, the changes in these views that would result from implementation of each of the project alternatives are described.

13.2 Affected Environment

For the purpose of this chapter, the affected environment consists of the construction area.

13.2.1 Methods

Aesthetics has been defined as the study or theory of beauty and the psychological responses to it. The evaluation of existing conditions of aesthetic resources in the landscape requires the application of a process that objectively identifies the visual features, or resources, of the landscape; assesses the character and quality of those resources relative to overall regional visual character; and identifies the importance, or *sensitivity*, of views of visual resources in the landscape to people. With this preliminary establishment of the baseline (existing) conditions, a proposed project or another change to the landscape can be systematically evaluated for its degree of impact. The degree of impact depends on both the magnitude of change in the visual resource (i.e., visual character and quality) and viewers' responses to and concern for those changes. This general process is similar for all established federal procedures for visual assessment (Smardon et al. 1986) and represents a suitable methodology for visual assessment for other projects and areas.

The approach for this visual assessment is adapted from the Federal Highway Administration's (FHWA's) visual impact assessment system (Federal Highway Administration 1983) in combination with other established visual assessment systems. The visual impact assessment process involves identification of:

- visual resources (i.e., visual character and quality) of the region, the immediate project construction area, and the project operation area.
- important viewing locations (e.g., public roads) and the general visibility of the project operation area and construction area using descriptions and photographs;
- relevant policies and concerns for protection of visual resources;
- viewer groups and their sensitivity; and
- potential impacts, mitigation for impacts, and other recommendations.

13.2.2 Criteria for Visual Assessment

The aesthetic value of an area is a measure of its visual character and scenic quality combined with the viewer response to the area (Federal Highway Administration 1983). The scenic quality component can best be described as the overall impression that an individual viewer retains after driving through, walking through, or flying over an area (U.S. Bureau of Land Management 1980). Viewer response is a combination of viewer exposure and viewer sensitivity. Viewer exposure is a function of the number of viewers, the number of views seen, the distance of the viewers, and the viewing duration. Viewer sensitivity relates to the extent of the public's concern for particular viewsheds. These terms and criteria are described in detail below.

13.2.2.1 Visual Character

Both natural and artificial landscape features compose the character of a view. Geologic, hydrologic, botanical, wildlife, recreational, and urban features influence aesthetic value. Urban features include those associated with landscape settlement and development, including roads, utilities, structures, earthwork, and the results of other human activities. The perception of visual characters can vary significantly seasonally and even hourly as weather, light, shadow, and the elements that compose the viewshed change. The appearance of the landscape is described below using descriptions of the dominance of elements of form, line, color, and texture of these features. These elements are the basic components used to describe visual character and quality for most visual assessments (U.S. Forest Service 1974, Federal Highway Administration 1983).

13.2.2.2 Visual Quality

The visual quality of the region and the project construction area were evaluated using the well established approach to visual analysis adopted by the FHWA, employing the criteria of vividness, intactness, and unity (Federal Highway Administration 1983, Dunne and Leopold 1978, Jones et al. 1975). These criteria are defined below.

- *Vividness* is the visual power or memorability of landscape components as they combine in striking or distinctive visual patterns.
- *Intactness* is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well kept urban and rural landscapes as well as natural settings.
- *Unity* is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the artificial landscape. (Federal Highway Administration 1983).

Visual quality is evaluated based on the relative degree of vividness, intactness, and unity as modified by its visual sensitivity. High-quality views are highly vivid, relatively intact, and exhibit a high degree of visual unity. Low-quality views lack vividness, are not visually intact, and possess a low degree of visual unity.

13.2.2.3 Visual Sensitivity and Viewer Response

The measure of the quality of a view must be tempered with the overall sensitivity of the viewer. Viewer sensitivity or concern is based on the visibility of resources in the landscape, the proximity of viewers to the visual resource, the relative elevation of viewers to the visual resource, the frequency and duration of views, the number of viewers, and the type and expectations of individuals and viewer groups.

The importance of a view (i.e., degree of impact) is related in part to the position of the viewer relative to the resource; therefore, visibility and visual dominance of landscape elements are described with respect to their placement within the viewshed. A viewshed is defined as “all of the surface area visible from a particular location (e.g., an overlook) or sequence of locations (e.g., roadway or trail)” (Federal Highway Administration 1983).

To identify the importance of the views of a resource, a viewshed may be broken into distance zones of foreground, middleground, and background. Generally, the closer a resource is to the viewer, the more dominant it is and the greater is its importance to the viewer. Although distance zones in viewsheds may vary between different geographic regions or types of terrain, a commonly used set of criteria identifies the foreground distance zones as 0.25–0.5 mile from the

viewer, the middleground zone as extending from the foreground zone to 3–5 miles from the viewer, and the background zone as extending from the middleground zone to infinity (U.S. Forest Service 1974).

Visual sensitivity is dependent on the number and type of viewers and the frequency (e.g., daily or seasonally) and duration of views (i.e., how long a scene is viewed). Visual sensitivity is also modified by viewer activity, awareness, and visual expectations in relation to the number of viewers and the viewing duration. For example, visual sensitivity is higher for views seen by people who are driving for pleasure, people engaging in recreational activities (such as hiking, biking, or camping), and homeowners viewing from their residences. It tends to be lower for views seen by people driving to and from work or as part of their work (U.S. Forest Service 1974, Federal Highway Administration 1983, U.S. Soil Conservation Service 1978). Commuters and nonrecreational travelers have generally fleeting views and tend to focus away from surrounding scenery and onto commute traffic and therefore are generally considered to have low aesthetic sensitivity. Residential viewers typically have extended viewing periods and are generally concerned about changes in the views from their homes and are generally considered to have high visual sensitivity. Views from recreation trails and areas, scenic highways, and scenic overlooks are generally assessed as having high visual sensitivity.

Judgments of visual quality and viewer response must be made based on a regional frame of reference (U.S. Soil Conservation Service 1978). The same landform or visual resource appearing in different geographic areas could have different visual resource quality and sensitivity in each setting. For example, a small hill may be a significant visual element on a flat landscape but have very little significance in mountainous terrain. The visual character of the Truckee River in eastern Nevada County is described below to provide a regional frame of reference. The visual quality and sensitivity of the project construction area's visual resources are described below using previously defined terminology.

13.2.3 Regional Setting

13.2.3.1 Regional Visual Character

The Truckee River in eastern Nevada County is closely intertwined with I-80 as they share the same corridor through the mountain passes and valleys of the eastern side of the Sierra Nevada range and descend into the Reno metropolitan area. The angular and craggy mountain peaks that define the corridor are striking and picturesque through this reach. The vegetative cover is tall coniferous forest with sagebrush scrub on the more arid slopes and willow scrub and other riparian vegetation along the edge of the river. The rockiness and steep grade of the river provide for many riffles and turbulence that is highly visible below and adjacent to the highway for much of this reach. Built forms include historic wooden railroad and flume structures. The railroad trestles are punctuated with long icicles lasting through much of the year while the aqueduct provides a sense of

movement from the rushing and splashing water. These structures are visually interesting and contribute to the scenic quality of the area. Most of the users of this area are travelers on the highway, many of whom have high scenic expectations because of travel associated with recreation (including camping, skiing, sightseeing, and other area entertainment).

13.2.3.2 Visual Resources Associated with the Project Construction Area

The immediate project vicinity is composed of the Truckee River near Floriston and its corresponding river channel. The visual character of this location is best described as a mix of natural features and artificial elements. The natural features of the river channel are consistent with the regional geologic features and vegetation patterns, including dramatic rock outcrops and diverse plant forms. The artificial elements include the remnants of the old Farad diversion and flume, the I-80 bridge, the remains of Old Highway 40, the UPRR tracks, and a Caltrans maintenance structure (figure 13-1).

Foreground views (from 0 to 0.25 mile) from river left look directly upon the Truckee River and the I-80 corridor. Middleground views are primarily of UPRR tracks, and the small community of Floriston. Background views are composed of upland forested slopes. Views of the project construction area from river left are shown in figure 13-2.

Foreground views from river right include the old diversion structure, remnants of the old weir, and the road cut for Old Highway 40. The hillside in this area includes a substantial amount of mass wasting and recent slide activity. Middleground and background views are composed of upland forested slopes within the Humboldt-Toiyabe National Forest. Views of the project construction area from river right are shown in figure 13-3.

The existing visual quality of the project construction area can be described as having high to moderate vividness due to the scenic nature of the river channel and the forested upland slopes. Views from this location are moderately intact and unified because the presence of I-80, the railroad tracks, utility lines, and the Caltrans maintenance facility are somewhat obtrusive on the natural river landscape and detract from the overall natural scenery. The highway, rail, and utility corridors generally follow the contour of the river in this area, but the overall sense of scale and, in some cases, the color of earth fill materials is incongruent with the natural setting.

13.2.3.3 Existing Sources of Light and Glare in the Project Vicinity

The stretch of I-80 located in the project vicinity is not illuminated by overhead fixtures. A minimal amount of lighting is associated with the Caltrans maintenance facility at the I-80 Floriston off-ramp. Sources of light originating from residences and other structures in the community of Floriston are present but represent small contributions to the viewshed from all locations. In addition, there is one light fixture on a pole located next to the old intake structure on river left. Sources of glare are primarily limited to glass and metal surfaces on passing vehicles.

13.2.3.4 Views of the Project Construction Area from I-80 and Other Public Roads

The proposed diversion site occupies the foreground of the viewshed coinciding with both eastbound and westbound traffic on I-80. The site can be seen for a longer duration from the westbound direction because it is closer to the river. The duration of views of the project construction area from both directions ranges from approximately 15 seconds (eastbound) to 40 seconds (westbound) for vehicles traveling at the posted speed limit.

Views of the project construction area possess a high vividness as the steep-walled canyon setting of the Truckee River in the middle and background provide for a range of striking visual patterns. These views are typical of those associated with the I-80 corridor in eastern Nevada County. Views of the site possess a moderate intactness and unity because foreground structures like the Caltrans maintenance shed, railroad tracks, and scattered remnants of the old diversion structure represent encroaching elements to views that would otherwise represent a harmonious landscape. Middleground and background views of the adjacent hillsides and mountainous terrain remain highly intact and unified in the natural landscape. Travelers along this corridor are balanced between recreationists, who have relatively high aesthetic sensitivity, and commuters and freight drivers with lower aesthetic sensitivity.

13.2.3.5 Views of the Project Construction Area from Residences in Floriston

The small community of Floriston is located directly east of the project construction area with views toward the west and northwest. There are a number of single-family residences, some of which are multistory, that overlook I-80 and the Truckee River. Railroad tracks, the I-80 corridor, access ramps, and the Caltrans maintenance facility primarily dominate views of the foreground. Middleground and background views consist of portions of the river floodplain

and the adjacent canyon hillside and mountain terrain. Views from the community of Floriston are shown in figure 13-4.

Views from Floriston have high vividness because of their unique location in the upland region above the river floodplain. However, the presence of I-80 is somewhat obtrusive and other features associated with utilities and highway infrastructure contribute to an overall moderate level of intactness and unity in the foreground. Middleground and background views of the adjacent hillside and the surrounding mountain terrain remain highly intact and unified in the natural landscape.

13.2.4 Regulatory Setting

13.2.4.1 California Department of Transportation Scenic Highway Program

The segment of I-80 from State Route (SR) 20 near Emigrant Gap to the Nevada state line near Verdi (which includes the project operation area), is officially designated by California legislation as a scenic highway. As such, its scenic corridor (defined as the area of land generally adjacent to and visible from the highway) is subject to protection including regulation of land use, site planning, advertising, earthmoving, landscaping, and design and appearance of structures and equipment. Examples of visual intrusions that would degrade scenic corridors as stipulated by Caltrans and that are applicable to this project include dense and continuous development, highly reflective surfaces, development along ridge lines, extensive cut and fill, scarred hillsides and landscapes, exposed and unvegetated earth, and dominance of exotic vegetation. Unsightly land uses would include those actions that result in these conditions (California Department of Transportation 1996).

13.2.4.2 Nevada County General Plan Goals and Policies

The Nevada County General Plan provides the policy and implementation framework to guide development throughout the county. The general plan, adopted in 1996, includes goals, objectives, and policies specific to aesthetics and community design with an emphasis on maintaining aesthetic character through urban design and scenic preservation. It offers further guidelines concerning scenic corridors, lighting, and signage. Specific standards identified in Chapter II of the Nevada County land use code that are applicable to the proposed project and relate to visual resources, scenic corridors, lighting, and landscaping are listed below.

13.2.4.2.1 Visual Resource Standards

The following visual resource standards are identified in Sec. L-II 4.3.16, “Visually Important Ridgelines and Viewsheds” of the Nevada County code:

1. In no case shall the roofline or any portion of a structure extend above a visually important ridgeline.
2. Site grading shall not alter the existing silhouette of visually important ridgelines.
3. When the county determines that a project may impact a visually important ridgeline or viewshed, a management plan shall be prepared by a land use planner, an architect, or a landscape architect. This determination may be based on a countywide or area-wide inventory of visibly prominent ridgelines and large-scale viewsheds, or, in the absence of an inventory, upon a determination that the proposed project may be likely to impact a visually important ridgeline or viewshed.

The management plan shall include a visual analysis which shall normally include a determination of the geographical location and level of visual quality of the defined area. It shall normally include a determination of the number and type of existing and potential viewers, viewing distance, angle, focal point, and landscape and topographic variety and uniqueness. The management plan shall delineate specific protective measures and impact controls necessary to minimize visual impact to the maximum extent possible.

13.2.4.2.2 Standards for Scenic Corridor Designations

The following applicable site-development standards for areas designated as scenic corridors are identified in Section L-II 2.7.7 of the Nevada County code:

1. A scenic corridor analysis shall be required for all applicable development. The analysis shall be submitted on forms provided by the planning department and shall describe the scenic and/or historic resources of the project setting, how the development will ensure compatibility with the scenic nature of the surrounding area, and how it will minimize impacts to identified scenic resources. If a scenic corridor study has been adopted for the subject corridor, the analysis must be consistent with the adopted study.
2. Solid fencing within the front yard setback is prohibited. Fencing within the scenic corridor shall be landscaped to buffer its view from the roadway or adjacent properties. The scale, color, and materials used should be compatible with the site and surrounding viewsheds.
3. All structures and improvements shall comply with Sec. L-II 4.2 Community Design Standards.

4. Required landscaping may be increased up to 50% if needed to ensure the aesthetic quality of the proposed development.

13.2.4.2.3 Landscaping Standards

The following applicable site-development standards for landscaping are identified in Section L-II 4.2.7 of the Nevada County code:

1. Plans. A landscape plan shall be submitted for each applicable project and all discretionary projects shall require said plans be prepared by a licensed landscape architect or licensed contractor.
 - a. Preliminary Plans. Preliminary plans, drawn to scale, shall be submitted at the time of project application and shall include the following:
 - 1) The location of planting areas
 - 2) The size, number, and type of plants existing and proposed
 - 3) The type(s) of irrigation to be used
 - 4) The amount of area devoted to turf, drought-tolerant plants, and native plants
 - 5) Planting symbols shall be clearly drawn and plants labeled by botanical name, common names, container size, spacing, and quantities of plants indicated.
 - b. Final Plans. Final plans shall be approved by the planning department prior to the start of any onsite construction or soil disturbance and prior to the issuance of a building permit. Final plans shall include:
 - 1) All details depicted on the preliminary plans and any modifications or additions included by conditions of approval
 - 2) The location of all required plant materials, evenly dispersed within each required planting area (interior parking lot landscaping, street bufferyards, and residential bufferyards)
 - 3) Provide a legend listing the type, number and size of plant materials, indicating both the required number and the provided number of each plant type. List plants for each required landscaped area. Include a listing of water usage type, or hydrozone, for each plant type. List plant materials in groupings of trees, shrubs and ground cover plants. Show both common names and botanical names of plants.
 - 4) Irrigation plan per subsection D.4. of this Section
 - 5) Evidence that a licensed landscape contractor will be responsible for plant and irrigation installation

- 6) If existing landscaping, including native vegetation, is to be retained, a note shall be provided on the plan stating that “any existing landscaping or native vegetation shown on the approved plan for retention, that is damaged or removed during construction, shall be repaired or replaced in kind with equivalent size.”
- 7) Assurance that the property owner will be responsible for the replacement of landscaping that does not survive or that deteriorates due to neglect

13.2.4.2.4 Standards for Lighting

The following applicable site-development standards for lighting are identified in Section L-II 4.2.8 of the Nevada County code:

1. A lighting plan shall be submitted with all discretionary projects that propose to install outdoor lighting. Plans shall depict the location, height and positioning of all light fixtures and shall provide a description of the type and style of lighting proposed, including pole or building mounted area lights and sign lights.
2. All outdoor light fixtures shall be fully shielded to prevent the light source or lens from being visible from adjacent properties and roadways, except for the following:
 - a. Airport lighting required for the safe and efficient movement of aircraft during flight, take off and landing.
 - b. Outdoor light fixtures used for outdoor recreational facilities when such shielding would cause an impairment to the visibility required in the intended recreational activity. In such cases, partially shielded fixtures and directional lighting methods shall be utilized to limit light pollution, glare, and light trespass, without diminishing the performance standards of the intended recreational activity.
3. Use fixtures with high efficiency lamps. High-pressure sodium, and mercury vapor light fixtures are prohibited.
4. Light poles shall be restricted to a maximum of 20 feet in height except that on parcels adjacent to residential or rural zoning districts, the maximum height shall be restricted to 15 feet.
5. All exterior lighting shall be maintained as installed.
6. Lighting shall be turned off between 11 p.m. and sunrise, except for those businesses operating during these hours or where a safety or security need is clearly demonstrated.

7. Lighting systems, other than signs, shall include dimmers, occupancy sensors, time controls or separate circuits, to allow sections of the lighting to be turned off as needed.
8. Security lighting fixtures shall be shielded and aimed so that illumination is directed only to the designated area and not cast on other areas. The use of motion or heat sensors may provide greater security than continuous lighting and are the preferred alternative to continuous nighttime lighting.

13.3 Impact Assessment Methodology

13.3.1 Analytical Approach

The following methods were used to evaluate the visual character of the project construction area, to assess the quality and character of its visual resources, and to describe views of and from it:

- direct field observation from vantage points including public roadways and public property,
- interpretation of aerial and general site photographs,
- review of project construction drawings and architectural renderings, and
- review of project alternatives with regard to compliance with state and local ordinances and regulations pertaining to visual quality.

13.3.2 Criteria for Determining Impact Significance

According to Appendix G of the State CEQA Guidelines, visual resource impacts are considered significant if a project has a “substantial, demonstrable negative aesthetic effect.” Based on professional standards and practices, a proposed project would have a significant impact if it would

- conflict with adopted visual resource policies;
- substantially reduce the vividness, intactness, or unity of high-quality views;
or
- introduce a substantial source of light or glare into the viewshed.

13.4 Impacts and Mitigation Measures of Alternative A: Proposed Project

13.4.1 Construction-Related Impacts

Impact 13-1: Short-Term Changes in Views of the Project Construction Area Resulting from Construction Activities

Construction activities associated with implementation of the proposed project would include excavation and placement of a temporary channel, installation of a dewatering system, construction of a rock foundation for a temporary diversion, construction of a permanent diversion structure, and construction of other associated facilities. Construction activities would introduce a considerable amount of heavy equipment and associated vehicles, including backhoes, dump trucks, concrete trucks, watering vehicles, and Baker tanks into the viewshed of the project construction area.

Substantial roadwork is ongoing on I-80 throughout eastern Nevada County. This roadwork includes some construction activities in the river channel associated with the replacement of bridges over the Truckee River (California Department of Transportation 2000). Views of construction activities and equipment are not new or uncommon in this area. In addition, Caltrans maintains and operates an equipment facility within the direct sight of viewers from the project construction area, I-80, and the community of Floriston. Given the moderate level of overall intactness and unity of the viewshed at the project construction area, and that area viewers are relatively accustomed to construction equipment and activities, the visual impact of the presence of construction equipment is considered *less than significant*.

Although the impact on the local viewshed that results from construction activities is considered less than significant, construction activities associated with implementation of the proposed project would intrude on the foreground and middleground viewsheds of the community of Floriston and commuters on I-80. Recommendations for reducing the magnitude of this impact are presented below.

Mitigation Measure 13-1: Implement screening and limit work hours to reduce visual construction impacts on Floriston residents and I-80 commuters

The following measures are recommended to reduce the magnitude of the impact on short-term changes in views of the project construction area resulting from construction activities:

- *Where possible, construction staging areas for equipment, personal vehicles, and material storage will be sited to take advantage of natural screening opportunities provided by existing topography and vegetation. If chain-link security fencing is placed around such areas, slats of earth- or neutral-toned or other material selected for consistency with the Nevada County standards for scenic corridor designations will be used.*

13.4.2 Operation-Related Impacts

Impact 13-2: Changes in Views of the Project Construction Area Resulting from Project Implementation

Implementation of the proposed project would introduce substantial long-term visual changes to the river channel and the vicinity of the project construction area. These changes include the new diversion and intake structure as well as a 10- by 10-foot, 750-foot-long diversion conduit running from the intake structure to a settling pond on river right. In addition, the settling pond area would be equipped with a fish screen, catwalk, and outlet weir. Boulders removed from excavation would be placed against the side of the conduit that faces the river; however, portions of the conduit would be visible for its entire length and the top of this structure would be used as a maintenance access road. Materials for the diversion facilities and intake conduit would primarily consist of concrete and grouted boulders. Project implementation would also include visible portions of an MSE and soil nail wall on both sides of the river.

The overall visual quality of the project construction area would be changed by implementation of the proposed project. Views from the community of Floriston and I-80 are generally oriented directly towards, or within a 45° angle to, the Truckee River channel and the project construction area. In addition, these viewer groups possess relatively higher scenic expectations and sensitivity. This is especially true when placed in a regional context.

Project implementation would introduce obtrusive features into viewsheds that are currently representative of a relatively intact and harmonious natural riparian landscape. These features include the concrete diversion structure and 750-foot diversion conduit and access road as well as the settling pond, catwalk, and outlet weir. However, the addition of these project elements into the foreground

viewshed would be offset by the implementation of the restoration plan described in the project description, and would maintain the overall vividness, intactness, and unity of high-quality views. Therefore, this impact is considered *less than significant*. No mitigation is required.

Impact 13-3: Changes in Light and Glare Resulting from Project Implementation

Implementation of the proposed project would not introduce substantial additional sources of light and glare to the project construction area. Lighting necessary for project implementation would include the relocation and replacement of the light standard and fixture that is currently located at the site of the old intake structure. It is assumed that the replacement light fixture would be mounted at a height equal to or less than that of the existing fixture and that the luminaire would be a downcast, cut-off type with the minimum intensity for proper security. Materials used to replace the diversion structure would not create new sources of glare in the project construction area. This impact is considered *less than significant*. No mitigation is required.

Impact 13-4: Consistency with Adopted Plans and Policies Related to Visual Resources

Implementation of the proposed project would be consistent with existing policies related to visual resources stated in the Nevada County General Plan and state guidelines for scenic highways. Project implementation would also be consistent with the specific site-development guidelines for visual resources, scenic corridors, lighting, and landscaping based on completion of this analysis. If based on discretionary authority, Nevada County requires modifications to project design elements based on site design standards. These changes will be incorporated into the terms and conditions prior to permit approval. Therefore, this impact is considered *less than significant*. No mitigation is required.